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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/761,136

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Stephan Neumann

MITSI22178

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CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC  
1420 FIFTH AVENUE  
SUITE 2800  
SEATTLE, WA 98101-2347

EXAMINER

BENGHUZZI, MOHSIN M

ART UNIT

PAPER NUMBER

2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/04/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/761,136

Applicant(s)

NEUMANN ET AL.

Examiner

Mohsin (Ben) Benghuzzi

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date December 14, 2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because of the following:
  - a) In figures 1 to 6, it is unclear as to what the reference number '1' is used to designate. The number appears to be mistakenly designating the dashed box, which is already designated by the reference number '5'. Examiner requests clear designation.
  - b) In figures 1 to 6, it is unclear as to what the reference number '3' is used to designate. The number appears to be mistakenly designating an output of the HBF (4). Examiner requests clear designation.
  - c) It is disclosed in figures 2 to 6 that the register (30) is connected to an input side of the interpolation element (3), which is in contradiction with claim 1 that contains the limitation that the register (30) can be connected to the output side of the interpolation element (3).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

a) Regarding claims 1-5:

- i. In claim 1, Applicant has not particularly pointed out how the 'dynamic delaying' of a digitally sampled input signal is performed.
- ii. In claim 1, it is unclear whether the input or output of the register (30) is connected to the output side of the interpolation element (3).
- iii. In claim 1, line 3, the word 'can' renders the claim indefinite because it is unclear whether the register (30) is or is not connected to the interpolation

element (3). Examiner suggests that the words 'can be' are replaced with the word 'is.'

Examiner's interpretation of claim 1 – It is interpreted by Examiner that Applicant's intention is to claim the following: (a) an interpolation element that is connected in series with a memory element, i.e., output of the memory element is connected in a series manner to the input of interpolation element, (b) a register that is in parallel with the memory element, i.e., the memory element and the register have a common input, and (c) an input of the register is connected to an output of the interpolation element, i.e., the output side of the interpolation element is coupled to an input of the register.

b) Regarding claims 6-12:

In claim 6, Applicant has not particularly pointed out in the claims what is meant by the terms 'range (19),' 'range (20),' and 'range (21).' Although Applicant may have described said terms and related limitations in the instant specification, and although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kidd et al. (US 5,329,614) in view of Herrmann (US 5,280,352).

Kidd et al. disclose a device with a register, which is connected to the output side of an interpolation element for the storage of at least one sampled value of the input signal (54 in Fig. 5; column 5, lines 19-21; and 503 in Fig. 5, wherein, 503 in the figure is interpreted as the output side of the interpolator to which the register 54 is connected), and is arranged in parallel to a memory element (54, 55 in Fig. 5 and column 5, lines 19-27, wherein, 'RAM 55 whose output is coupled ... to be available to interpolator 56 via bus 502' is interpreted as output of RAM 55 is effectively connected to the input 502 of the interpolator, i.e., the output of RAM 55 is connected to the output of register 54 and, thus, RAM 55 and register 54 are arranged in parallel).

Kidd et al. does not disclose the interpolator to be series connected with a memory, however, Herrmann discloses an interpolator series connected with a memory (2 and 1 in Fig. 1).

It is essential that an interpolator be series connected to the memory holding samples to be interpolated. Series connection of the interpolator and the memory ensures that the stored samples are supplied to the interpolator. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the interpolator and memory of Kidd et al. series connected, as Herrmann teaches, in order to ensure that the stored samples in the memory are supplied to the interpolator.

***Allowable Subject Matter***

6. Claims 2-12 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hauptmann (US 4,528,565) discloses a device comprising a memory, a series connected interpolator, and a register connected to the interpolator.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohsin (Ben) Benghuzzi whose telephone number is (571) 270-1075. The examiner can normally be reached Monday through Friday, 8:30am- 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mohsin (Ben) Benghuzzi

March 30, 2007

  
**MOHAMMED GHAYOUR**  
**SUPERVISORY PATENT EXAMINER**